Iowa Technical Note No. 26
WINDOWS PESTICIDE SCREENING TOOL

Purpose and Background:

This technical note will provide the background and basic instructions to use the Windows Pesticide Screening Tool (WIN-PST). WIN-PST is a pesticide environmental risk screening tool that NRCS field office conservationists, extension agents, crop consultants, pesticide dealers, and producers can use to evaluate the potential for pesticides to move with water and eroded soil/organic matter and affect non-target organisms. NRCS staff and partners (such as private crop consultants) now have access to an easy-to-use tool for considering environmental risk when making recommendations that were previously based only on efficacy and economics. WIN-PST goes beyond previous NRCS screening tools to consider the impact of water table depth, irrigation, residue management and pesticide application area, method and rate class (Standard, Low, and Ultralow).

WIN-PST users can specify pesticides by product name or active ingredient. Long-term human and fish toxicity data and ratings are also included in WIN-PST. These toxicity ratings can be combined with the off-site movement potential ratings to provide an overall rating of the potential risks from pesticide movement below the root zone and past the edge of the field.

WIN-PST evaluates the potential loss by leaching and surface runoff. It utilizes both soil and pesticide properties. WIN-PST does not provide absolute results or consider the type of crop or range plant.

The USDA-NRCS National Water and Climate Center developed and supports the WIN-PST. The current NRCS Pest Management Policy and Pest Management Standard (595) requires the use of WIN-PST or other NRCS-approved environmental risk analysis tools to support the pest management component of a conservation plan.

Computer Logistics:

To operate the tool, the user will need a computer with at least a Pentium or equivalent processor running at 100 MHz; Windows 95, 98; or NT 4.0 (including CCE Configurations) operating systems, 16 meg of RAM or better; and 65 meg disk space or better before installation.

NRCS – IOWA
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To download WIN-PST program, log in as administrator and go to http://www.wcc.nrcs.usda.gov/water/quality/common/pestmgt/winpst.htm. Click on Download latest CCE Certification Software and Data; click on NRCS Download site (FTP). Print or read instructions on how to download WIN-PST and installing Iowa soils.

To download Iowa Soils Data, go to http://www.ia.nrcs.usda.gov/tech_resources.htm. Click on Iowa Win-PST Soils data information. Click on Soil IA Zip file which will open WinZip. Highlight all 4 files and click on extract. Extract files to C:\Program files\usda\Win-Pst\Soils. Choose yes if it asks if it is OK to overwrite current files.

Guidelines for Data Entry

(See Appendix I for attached WIN-PST Feature Outline for explanation of each entry field)

Step 1. From the WIN-PST Main Menu, Select Soils. View soils for your county at top using Change Area. Sort by Map Unit Symbol or by Component. You can show ratings, properties, and management. You can search within a soil survey area with Alt-A; you will get a blue screen, then type your map unit symbol or component and after the search is complete, press Enter. As you select each soil, if you have any site conditions (slope > 15%, high water table, macropores), you can enter these at the bottom (otherwise, default conditions will be used). Select by highlighting soil in browser – then check "Selected" box under browser. After selecting your soils, click on "Only Show Selected Soils."

Step 2. Return to the Main Menu. Select Pesticides. View and select pesticides by Product Name or Active Ingredient Name. Show all pesticides. To search for a pesticide, select Search, then click on Anywhere in Field, click off Match Case, then type in name of pesticide (product or active ingredient name), then select FIND. Select pesticide by highlighting in browser – then check "Selected" box under browser. After selecting your pesticides, click on "Only Show Selected Pesticides."

Step 3. Return to the Main Menu. Select Reports. Select appropriate site features (rainfall-high or low probability; Irrigation – high or low efficiency; residue management – well established (3-5 years) without a soil surface crust). Select pesticide, soil, and/or soil/pesticide hazard report (the latter will be the most useful for NRCS purposes). Click on Generate Selected WIN-PST Reports. Press yes if you want to overwrite the file or press no if you want to enter a different file name (for NRCS CCE machines, files are under C:\Programs\usda\WINPST\Reports as text files – these can be printed on the default printer (for version 2.005a, the first printer installed for your computer is the default printer and no additional printer will work) or saved and opened using Word to print).

Step 4. Use WIN-PST Ratings to Fill in Iowa Job Sheet Pest Management and to determine needed conservation treatment techniques. **See Appendix II** for example WIN-PST Soil/Pesticide Interaction Report and Pest Management Job Sheet (downloadable from http:/www.ia.usda.gov, click on Data and Technology, Technical References, Field Office Technical Guide, Section IV Practices, Standards and Specifications, Pest Management).

Pertinent information is taken from the WIN-PST Soil/Pesticide Interaction Report and entered onto the Pest Management Worksheet. Conservation treatment techniques are selected for

each alternative. The alternative is selected with the producer and the jobsheet is printed for signature and to be given to the producer and included in their case file with the worksheet.

Notes on Interpretation of WIN-PST Soil-Pesticide Interaction Report

(Source: Module 5—Part D—Sections 11 and 12 Environmental Risk Analysis—Pest Management: Pesticides, NEDC Nutrient and Pest Management Course)

For the most part, doing a pesticide risk analysis is not much different from typical resource planning. That is, the same steps are valid, including conducting a resource inventory. However, some extra information must be collected, including probable pesticide uses and application details required by the pesticide environmental risk analysis tool that will be used. When this information can come from the producer or their crop consultant, it should include all likely pesticide uses for a particular land unit. Final decisions about specific pesticide uses are often based on field conditions that vary from year to year, but the pest management component of the conservation plan should account for this expected variability whenever possible to avoid the need for continuous updates. Occasionally, unexpected conditions may call for previously unplanned pesticide uses. As soon as practical, new pesticide uses should be included in an updated pest management component of the conservation plan.

Resource inventories should also identify existing mitigation techniques (management techniques and/or conservation practices) that will help reduce pesticide losses. Typical resource inventory data such as distance to surface and/or ground water, soil types (by component or map unit), and field slopes will also be utilized in the pesticide environmental risk analysis process.

Benchmark conditions (what the producer is currently doing) should be evaluated first to determine if there are potential hazards from either runoff or leaching. Alternatives and/or mitigation practices can then be developed for those benchmark practices that pose significant risk (WIN-PST hazard rating of 'Intermediate' or greater) to identified resource concerns.

NRCS is not in the business of making pesticide recommendations, but of analyzing 'recommended pesticides', within the framework of an IPM program, for their potential environmental impacts. Additionally, NRCS can provide environmental risk analysis on alternatives to pesticides such as tillage for weed control. Hazard mitigation practices (e.g., buffer strips, riparian areas, and crop rotation), whether dealing with pesticides, tillage, burning, etc., can be recommended by NRCS to reduce the potential environmental hazards of benchmark or planned alternatives.

WIN-PST pesticide/ soil combinations that have a 'Low' or 'Very Low' hazard rating, would meet RMS criteria and not need mitigation. In some cases, where alternative IPM methodologies are available, the use of a pesticide with even a ‘Low’ or ‘Very Low’ hazard rating may be inappropriate. Those soil/pesticide combinations that rate 'High' or 'Intermediate' are prime candidates for mitigation practices. Once pesticide risk screening is done, the next step is to provide mitigation strategies.

Those combinations rating 'Extra High' are considered potentially very hazardous. Using pesticides that have an 'Extra High' rating, indicates the potential to do great harm to the identified resource concern, mostly due to their extreme toxicity to non-target organisms. Mitigation practices for these pesticides may not be sufficient to prevent potentially severe damage to the resource. The potential for mitigation failure is high. These pesticides should only be used with extreme caution and as infrequently as possible. Although these chemicals are applied according to the label, reliance on chemicals that receive an 'Extra High' rating may prevent a plan from reaching RMS status, even with mitigation.

Interpreting the WIN-PST hazard ratings

WIN-PST classifies the potential hazards into 5 classes. The classes are:

X—EXTRA HIGH
H—HIGH
I—INTERMEDIATE
L—LOW
V—VERY LOW

Only leaching hazard uses the very low class.

Action (mitigation) should be taken when a hazard for the resource concern is listed 'EXTRA HIGH', 'HIGH', or 'INTERMEDIATE'. The use of mitigation measures or conservation treatment techniques included in the 595a worksheet/jobsheet can be used as guidance for developing a strategy. Hazard ratings of HIGH and INTERMEDIATE for sediment or runoff can usually be made acceptable by implementing appropriate mitigation measures. Hazard ratings of HIGH for leaching is more difficult to mitigate without using a less hazardous pesticide.

In general, HIGH hazard ratings warrant more extensive mitigation than INTERMEDIATE hazard ratings. How extensive mitigation needs to be is also dependent on other factors such as the existing level of impairment of the resource, resource sensitivity, and desired level of resource protection. For soil/pesticide combinations that are rated as an 'EXTRA HIGH' hazard potential, mitigation may not be effective. For resources that are highly sensitive or for which a high degree of resource protection is desired, substitution of another less hazardous chemical may be the only remedy. In these cases, the conservationist needs to work with the producer, crop consultants, or extension specialist to find efficacious, economically acceptable and lower risk alternatives.

For soil/pesticide interactions classified as 'LOW' or 'VERY LOW' hazards, no further action or mitigation is needed. As long as these chemicals are used according to the label, they meet the pesticide quality criteria for RMS planning.

Ground and surface water vulnerability is not measured directly by WIN-PST. Instead, WIN-PST gives risk estimates at the edge of the field or bottom of the root zone. Estimates of ground or surface water vulnerability would require information not easily obtained, such as ground water depth, vadose zone characteristics, travel time between edge of field and surface water, etc.

Significant attenuation of chemical contaminants may occur between the edge-of-field/bottom-of-root-zone and surface or ground water. In fact, many mitigation strategies NRCS utilizes to reduce surface water contamination, attempt to maximize attenuation of sediments and chemicals through lengthening the distance between the contamination source and the surface water resource. Other mitigation strategies attempt to either decrease the speed of runoff water (decreasing erosivity and sediment carrying capacity) or impound the runoff water (increasing infiltration and decreasing sediment carrying capacity). If, through mitigation practices, we can reduce hazardous pesticide losses from the edge-of-field/bottom-of-root-zone, or prevent pesticides from entering surface or ground water, we can protect identified resources of concern.

The WIN-PST hazard classes were developed to determine the potential hazard of an offsite pesticide movement. These ratings are created by combining the WIN-PST interaction ratings with exposure adjusted toxicity ratings. The result is, for any WIN-PST interaction rating and exposure-adjusted toxicity rating, a single hazard (potential hazard) rating for each resource concern (human and fish).

The exposure adjusted toxicity rating is a rating scheme devised by the WIN-PST team to estimate the probability for a pesticide to exceed a concentration in the environment. It is broken down into 5 classes based on the long-term toxicity. This value is not based on the pesticide physical properties used in WIN-PST loss potentials, but instead is based on best guess likelihood of a given pesticide applied at typical application rates (~ 0.5 kg/ha- 5.0 kg/ha) to exceed its long- term toxicity standard (e.g., EPA's Health Advisory, MCL, or MATC). For example, if it's extremely probable that a pesticide will exceed its toxicity threshold in the environment, it will be rated 'EXTRA HIGH'. This toxicity adjustment helps to determine the relative hazard of a chemical that moves offsite.

Note: All methods of pest management must be integrated with other components of the conservation plan. Clients must be instructed to pay special attention to all environmental hazards and site-specific application criteria listed on pesticide labels and contained in Extension and Crop Consultant recommendations. Mitigation practices shall be chosen which will not have a negative impact on any resource, including soil, water, air, plant, animal, or human.

APPENDIX I

WIN-PST Feature Outline

I. Main Window:

A. Select Soils - View soils (by component name or map unit symbol) and select individual soils to create Interaction and Soils reports.

B. Select Pesticides - View and select pesticides (by Product name or Active Ingredient name) to create Interaction and Pesticide reports.

C. **Manage Soil Data** - Select a state or soil survey area to view in Select Soils.

D. Manage Pesticide Data - Select pesticide names used in Select Pesticides and view background toxicity data.

E. Reports - Select report features and generates Interaction, Soil and Pesticide reports.

F. Glossary of terms – View and print WIN-PST definitions and algorithms.

G. Help, Tutorial, Readme, contacts etc.

II. Help (off of Main Window)

A. Credits - Who created WIN-PST

B. View README.TXT

1. WIN-PST Introduction
2. What's new
3. System requirements
4. Step-by-step soils downloading instructions.
5. Uninstalling WIN-PST

C. Tutorial: How to create your fist WIN-PST reports

D. I need help! Who can I contact?

E. Version/Release Date – Needed for troubleshooting.

F. WIN-PST Introduction (general statements of what WIN-PST does)

III. Manage Soils data (off of Main Window)

A. Select the soils data table used by WIN-PST. Choose a soils database.

B. Segment a WIN-PST soil data table by STSSAID (County). Split out a big database into smaller databases (e.g., State database into individual soils survey areas).

C. Merge WIN-PST soils data tables into a larger data table — Merge smaller soil databases into larger databases (e.g., individual soil survey databases into multi-soil survey database).

D. Reset Default Site Conditions. Set parameters such as % OM, Surface layer depth, and Water Table on/off, back to original defaults.
E. Turn on/off: Prompts (to reset soils data) and Tip (on creating reports)

IV. Manage Pesticide Data (off of Main Window)

A. Change the name associated with a given AI (e.g., Set the name **shown in select pesticide screen from common name "Atrazine" to** "AU rex")
B. Browse AI Toxicity Data — View AI.: chronic toxicity thresholds for **humans and fish, WIN-PST's Exposure Adjusted Toxicity ratings, PC** codes, CAS numbers and toxicity data sources)
C. Generate AI data report (Search the EPA pesticide registration database for occurrences of a chemical name or part of a name)
D. Turn on/off: Tip (on creating reports) and Access to REG_PROD (note: do not use, still under development)

V. Select Soils (off of Main Window)

A. Change area — Select a soils survey area from list to view.
B. Sort by MUSYM or COMPONENT — Set sort order to map unit symbol [sequence *1,* sequence 2....] or component name. *(Note: Sort order determines Alpha-Search [Alt-A] search field).*
C. Show Ratings — Toggles ratings on/off in browser.
D. Show Properties — Toggles properties on/off in browser.
E. Show Management — Toggles management on/off in browser.
F. Explain Texture Class — Toggles between textures abbreviated or textures spelled out in browser.
G. Soils browser columns (list of soils)
(Note: Columns can be resized to show complete data or header text. Columns can also be moved Changes to size or position will be lost upon exiting screen)

Show Ratings, Show Properties and Show Management checked

Base information: (always displayed)

1. SELECTED (Y or N [Select soils to create a report])
2. STSSAID (State Soil Survey ID)
3. MUSYM (Map Unit Symbol)
4. % Comp. (Component percent of Map Unit)
5. COMP-NAME (Component Name)
6. TEXTURE_CLASS (use explain texture class to toggle between

abbreviations and verbose)

Properties: (can be hidden by unchecking Show Properties)

Fixed properties

7. HYDRO (Hydrologic soil group) —SLP, SSRP, SARP
8. KFACT (USLE soil erodibility factor) —SLP, SARP

User Modifiable Properties

9. OM[1] (User) (Organic mailer percent of first layer or horizon) SLP
10. DEPTH[1] (User) (Depth of the first horizon) —SLP

Site Conditions: (can be hidden by unchecking Show Management)

11. SLOPE (Set to Y if slope is grater than 15%- Also set by checking box 'Slope ***>15*** %') Adjusts SARP +1
12. MACROPORES (surface connected cracks, *Also set by checking box 'Macropores)* Adjust SLP +1
13. HWT (High Water Table, set to Y if WTDEPL < **2ft and** WTKIND= Apparent, ***Also set by checking box 'High Water Table')***

Adjust SLP to 'HIGH'

Loss Ratings: (can be hidden by unchecking Show Ratings)

14. SLP — Soil Leaching Potential
15. SSRP — Soil Solution Runoff Potential
16. SARP — Soil Adsorbed Runoff Potential

Additional base information:

17. SEQNUM (Map unit sequence number)

H. Selecting soils

Select soils by:

1. Highlighting soil in browser —then check "Selected" box under browser (Best method)
2. Type 'Y' in SELECTED field
3. Triple click on soil in browser

I. Site Conditions

Set site conditions by clicking on box (These also appear in browser as Y or N)

1. **Slope >15%** (Browser field SLOPE)
2. **High Water Table** (Browser field HWT)

3. **Macropores** (Browser field Macropores)

J. Show All / Only Show Selected Soils (shows subset of soils that will be used to create reports)

K. Default Conditions

1. **Default OM Range** (%) *Low* & *High*
2. **Default First Horizon Depth** (in.)
3. **Default Slope** (%) *Low & High*

L. Global Selection / de-selection

1. **Deselect All** — Deselect all soils
2. **Select All** — Select all soils

M. Restore Default Site Conditions (Restores original default conditions from the soils database)

N. Help (Select Soils screen -How to: do searches, create a report, change OM% and Layer, etc)

VI. Select Pesticides (off of Main Window)

A. View AIs or PRODUCTS (e.g., 'Atrazine' vs. 'Aatrex 4L Herbicide')

B. Sort By ID or Name — Orders records numerically or alphabetically, also sets Alpha Search criteria)

1. If View set to PRODUCTS: Sorts on EPA Registration Number (EPAREGNO) or Product name (PRODNAME)
2. If View set to AI's: Sorts on PC Code (PC CODE) or Active Ingredient Name (AI NAME)

C. Show All/Only Show Selected Pesticides — Shows the subset of pesticides that will be used to create reports)

D. Show Management (Shows management columns in browser)

PRODUCT View

E. Product browser columns (list of Products)

(Note: Columns can be resized to show complete data or header text Columns can also be moved Changes to size or position will be lost upon exiting screen)

Show Management checked on

Base information: (always displayed)

1. SELECTED — Y or N (Select products to create a report)

2. PRODNAME — Product Name

3. EPAREGNO — EPA Registration Number

4. AI_NAME — Active Ingredient Name. (Note: Products may have multiple AI's)

5. PC_CODE — PC Code associated with AI

6. % Product — % AI in Product

Pesticide Management — User Modifiable (can be hidden by unchecking Show Management)

7. APP_AREA — Application area (Broadcast [default] or Banded [Applied to 50% of field or less])

8. APP_METH — Application method (Surface Applied, Soil Incorporated, or Foliar)

9. APP_RATE — Application rate (Standard [above 0.25 lb./acre, Low [between 0.10 and including 0.25 lb./acre] or Ultra Low [at or below 0.10 lb./acre])

F. List Active Ingredients and Ratings — Show pesticide ratings for A.I.'s contained in product (only one product at a time). (Note: All fields are shown. There is no way to show/hide fields in this view).

1. AI Selected — Selects AI in the AI browser

2. AI_NAME — Preferred common name for AI

3. % Product — % AI in product (same as # 6 above in Browser: PRODUCT View)

4. PC-CODE — PC Code associated with AI (same as # 5 in Browser: PRODUCT View)

5. PH — pH at which AI property is valid

6. HL — field half-life (PLP, PSRP, PARP)

7. KOC — Soil Sorption Coefficient (PLP, PSRP, PARP)

8. SOL — Water solubility (PLP, PSRP, PARP)

9. Human Toxicity — Long-term human threshold in ppb

10. MATC — Maximum Acceptable Toxicant Concentration; Long-Term threshold for fish in ppb

11. STV — Sediment Toxicity Value; Long-term threshold for fish (Koc x MATC)

12. PLP — Pesticide Leaching Potential

13. PSRP — Pesticide Solution Runoff Potential

14. PARP — Pesticide Adsorbed Runoff Potential

15. Human Tox — Exposure Adjusted Toxicity class, based on long-term human toxicity thresholds.

16. MATC Tox — Exposure Adjusted Toxicity class, based on long-term fish toxicity threshold.

17. STV Tox — Exposure Adjusted Toxicity class, based on long-term sediment toxicity threshold.

18. CAS_NO — Chemical Abstract Service Registration Number

G. Broadcast (Default) or Banded (Banded if applied 50% or less of field)

H. Surface applied (Default), **Soil Incorporated** (with light tillage or irrigation) or **Foliar** (directed at nearly full crop/weed canopy)

I. Rate:

1. **Standard** (greater than 0.25 lb./acre)

2. **Low** (between 0.10 lb./acre up to and including 0.25 lb./acre)

3. **Ultra Low** (0.10 lb./acre and below)

J. Deselect All — Deselects all products

K. Select All — Selects all products

L. Reset Management — Sets management back to defaults: Broadcast, Surface Applied, Standard.

M. Help — Select Pesticides screen -How to do searches (for products, ai's, pc codes, EPA registration numbers), create reports, view rating adjustments, etc.

AI View

N. Show Ratings — Toggles ratings on/off in browser

0. Show Properties — Toggles properties on/off in browser

P. Show Management — Toggles management on/off in browser

Q. AI Browser columns (list of AI's)

(Note: Columns can be resized to show complete data or header text Columns can also be moved Changes to size or position will be lost upon exiting screen.)

Base information: (always displayed)

1. AI Selected — Y or N (Select AI's to create a report)

2. AI_NAME — Preferred common name for AI

3. PC-CODE — PC Code associated with AI (same as # 5 in Browser: PRODUCT View)

Pesticide Properties

4. PH — pH at which AI property is valid

5. HL — Field half-life (PLP, PSRP, PARP)

6. KOC — Soil Sorption Coefficient (PLP, PSRP, PARP)

7. SOL — Water solubility (PLP, PSRP, PARP)

8. Human Toxicity — Long-term human threshold in ppb

9. MATC — Maximum Acceptable Toxicant Concentration; Long-term threshold for fish in ppb

10.STV — Sediment Toxicity Value; Long-term threshold for fish (Koc x MATC)

Pesticide Management — User Modifiable (can be hidden by unchecking **Show Management**)

11. APP_AREA — Application area (Broadcast [default] or Banded [Applied to 50% of field or less])

12. APP_METH — Application method (Surface Applied, Soil Incorporated, or Foliar)

13.APP_RATE —Application rate (Standard [above 0.25 lb./acre, Low [between 0.10 and including 0.25 lb./acre] or Ultra Low [at or below 0.10 lb./acre])
Ratings (can be hidden by unchecking **Show Ratings**)

14. PLP — Pesticide Leaching Potential

15. PSRP — Pesticide Solution Runoff Potential

16. PARP — Pesticide Adsorbed Runoff Potential

17. Human Tox — Exposure Adjusted Toxicity class, based on long-term human toxicity thresholds.

18. MATC — Exposure Adjusted Toxicity class for MATC, based on long-term fish toxicity threshold.

19. STV — Exposure Adjusted Toxicity class for 51W, based on long-term sediment toxicity threshold.

Additional base information: (always displayed as last column)

20. CAS_NO — Chemical Abstract Service Registration Number)

R. Broadcast (Default) or Banded (Banded if applied 50% or less of Field)

S. Surface applied (Default), **Soil Incorporated (**with light tillage or irrigation) or **Foliar** (directed at nearly full crop/weed canopy)

T. Rate:

1. **Standard** (greater than 0.25 lb./acre),

2. **Low** (between 0.10 lb./acre up to and including 0.25 lb./acre)

3. **Ultra Low** (0.10 lb./acre and below)

U. List Products — List all currently EPA registered products containing the AI highlighted in the browser.

V. Alternate Names — List alternate names that the AI, highlighted in the browser, has been associated with.

W. Deselect All — Deselects all AI's.

X. Select All — $elects all AI's.

Y. Reset Management — Sets management back to defaults:

Broadcast, Surface Applied, Standard.

VII. Reports

A. Headers: — Checking User Data box toggles header information to be printed on the reports on/off

1. Cooperator;
2. Tract
3. Field

B. Site Conditions:

1. **Rainfall:** High or Low Probability
2. **Irrigation** (None, High Efficiency, Low Efficiency)
3. **Residue Management** — Check if well established 3-5 years without soil surface crust

Pesticide Report: — Toggle on/off creating a Pesticide Report

C. Products or AI's — Choose which report that will be created. ***(Note: you must have previously selected AI's to get AI Reports and you must have previously selected Products to get Product Reports. AI selections are not linked to Product selections).***

D. Order Name or ID — Order by Name or ID on Pesticide Report.

E. Display on report

1. Properties — Toggles on/off pesticide properties on report.
2. Ratings — Toggles on/off pesticide ratings on report.
3. PC_CODE — Toggles on/off PC Code on report.
4. CAS_NO — Toggles on/off pesticide CAS Number on report.

5. Glossary — Toggles on/off printing Pesticide Report Glossary topics on soil report. Pesticide Report Glossary topics can be selected through the **Glossary of Terms**.

F. Report File — File name to save Pesticide Report to disk.

G. View — View pesticide report shown in Report File.

Soil Report — Toggle on/off creating a Soil Report.

H. Display on report:

1. Properties — Toggles on/off soil properties.
2. Ratings — Toggles on/off soil ratings.
3. Glossary — Toggles on/off printing Soils Report Glossary topics on soil report. Soils Report Glossary topics can be selected through the **Glossary of Terms**.

I. Report File — File name to save Soil Report to disk.

J. View — View soil report shown in Report File.

Soil/Pesticide Hazard Report — Toggle on/off creating a Soil/Pesticide Hazard Report.

K. Display on report:

1. PC_CODE — Toggles on/off PC Code on report.
2. CAS_NO — Toggles on/off pesticide CAS Number on report.

3. Glossary — Toggles on/off printing the Soil / Pesticide Interaction Report Glossary on Soil/Pesticide Hazard Report. Soil / Pesticide Interaction Report Glossary topics can be selected through the Glossary of Terms.

L. Report File — File name to save Soil/Pesticide Hazard Report to disk.

M. View — View report shown in Report File

N. Glossary of Terms — Provides WIN-PST definitions and algorithms [also found on **Main Window**].

0. **Generate Selected WIN-PST Reports** — Generates chosen reports.

Note: If you generate a report with the same name as a report that has already been created, you will be asked if it is OK to overwrite the old file. Choose 'No' to rename the report. Choose 'Cancel' to abort creating a new report.

APPENDIX II

EXAMPLE WIN-PST SOIL / PESTICIDE INTERACTION LOSS POTENTIAL and HAZARD RATINGS REPORT

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=========================================================================

Soils Data Table: SOIL_IA  Sort Order: MUSYM
Pesticide Data Table Sort Order: NAME
                                                        SOILS
                          370C2: Sharpsburg SICL 90%  | 371C:  NIRA SICL 60%
                          HYDRO: B                    | HYDRO: B
PESTICIDES                       UNION COUNTY, IOWA     UNION COUNTY, IOWA

                                 PART: IA175            PART: IA175
=========================================================================
2,4-DB 200 WEED KILLER  REG_NO: 00274900516
_________________________________________________________________________
     25.90% Dimethylamine 4-(2,4-dichlorophenoxy)butyrate
                          Loss          Human  Fish  | Loss      Human  Fish
                          Potential     Hazard Hazard|Potential Hazard Hazard|
                           ---------------------------|----------------------|
            Leaching  (ILP): I (f)       L      V    | I (f)       L      V    |
      Solution Runoff (ISRP): L (f)       L      V    | L (f)       L      V    |
      Adsorbed Runoff (IARP): L (f)              L    | L (f)              L    |
=========================================================================
AATREX 4L HERBICIDE  REG_NO: 00010000497
_________________________________________________________________________
     42.6% Atrazine (ANSI)
                           Loss          Human  Fish  | Loss      Human  Fish  |
                           Potential     Hazard Hazard|Potential Hazard Hazard|
                         -------------------------------|----------------------|
            Leaching  (ILP): H            H      I    | I           H      I    |
     Solution Runoff (ISRP): H            H      I    | H           H      I    |
     Adsorbed Runoff (IARP): I                   L    | I                  L    |
=========================================================================
TREFLAN 5G  REG_NO: 06271900098
_________________________________________________________________________
5.00% Trifluralin (ANSI)
                           Loss          Human  Fish  | Loss      Human  Fish  |
                           Potential     Hazard Hazard|Potential Hazard Hazard|
                         -------------------------------|----------------------|
            Leaching  (ILP): H (i)       H      H    | H (i)       H      H    |
     Solution Runoff (ISRP): L (i)       I      I    | L (i)       I      I    |
     Adsorbed Runoff (IARP): I (i)              L    | I (i)              L    |
=========================================================================
(C:\PROGRA~1\USDA\WIN-PST\REPORTS\INTERCT2.TXT generated on 05/17/02 at 13:19)
=========================================================================

X -- eXtra high
H -- High
I -- Intermediate
L -- Low
V -- Very low



Conditions that affect ratings:
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  (none) -- Broadcast application (default); applied to more than 1/2 the field
    b    -- Banded application; applied to 1/2 the field or less

  (none) -- Surface applied (default); applied to the soil surface
    i    -- Soil incorporated; with light tillage or irrigation
    f    -- Foliar application; directed spray at nearly full crop/weed canopy

  (none) -- Standard application rate (default); greater than 1/4 lb/acre
    l    -- Low rate of application;             1/10    to   1/4 lb/acre
   <ul>  -- Ultra Low rate of application;       1/10 lb/acre or less

    m    -- There are macropores in the surface horizon deeper than 24"
    w    -- The high water table comes within 24" of the surface during the
growing season
    s    -- The field slope is greater than 15%
    r    -- Residue management

   <hl>  -- High probability of rain, Low  efficiency irrigation
   <lh>  -- Low  probability of rain, High efficiency irrigation
   <ln>  -- Low  probability of rain, No irrigation

SPISP II I-Ratings:
   ILP   -- Soil / Pesticide Interaction Leaching Potential
   ISRP  -- Soil / Pesticide Interaction Solution Runoff Potential
   IARP  -- Soil / Pesticide Interaction Adsorbed Runoff Potential
```